

From wang!elf.wang.com!ucsd.edu!info-hams-relay Thu Apr 4 08:50:20 1991 remote
from tosspot
Received: by tosspot (1.64/waf)
via UUCP; Thu, 04 Apr 91 05:17:27 EST
for lee
Received: from somewhere by elf.wang.com id aa10395; Thu, 4 Apr 91 8:50:19 GMT
Received: from ucsd.edu by relay1.UU.NET with SMTP
(5.61/UUNET-shadow-mx) id AA10520; Thu, 4 Apr 91 03:32:56 -0500
Received: by ucsd.edu; id AA02193
sendmail 5.64/UCSD-2.1-sun
Wed, 3 Apr 91 21:49:21 -0800 for brian
Received: by ucsd.edu; id AA02175
sendmail 5.64/UCSD-2.1-sun
Wed, 3 Apr 91 21:49:15 -0800 for /usr/lib/sendmail -oc -odb -oQ/var/spool/
lqueue -oi -finfo-hams-relay info-hams-list
Message-Id: <9104040549.AA02175@ucsd.edu>
Date: Wed, 3 Apr 91 21:49:12 PST
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>
Reply-To: Info-Hams@ucsd.edu
Subject: Info-Hams Digest V91 #264
To: Info-Hams@ucsd.edu

Info-Hams Digest Wed, 3 Apr 91 Volume 91 : Issue 264

Today's Topics:

15 Meter Beam \$75+Shipping
[chuck: a few fundamental questions about RF signals]
AOR 2002 scanner
ATV: AM or FM
Can you really learn code from tapes?
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large 110->220 transformers
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RG8U (4 msgs)
sattelite tracking

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: 1 Apr 91 18:29:05 GMT
From: hpfcso!hplvec!sjo@hplabs.hpl.hp.com
Subject: 15 Meter Beam \$75+Shipping
To: info-hams@ucsd.edu

Prefer Northern Colorado buyer... For Sale 15 meter monoband beam.

For Sale (Windsor, Colorado):

CushCraft 15 Meter MonoBand Beam with Owners Manual for \$75 with pole and house tripod.

I have instructions for 10 or 15 meter mono beam configuration.

I will disassemble, you pay the shipping...

Scott Onofrio (sjo@hplvec.lvld.hp.com)

Date: 2 Apr 91 20:01:01 GMT
From: hpl-opus!hpnmdla!alanb@hplabs.hpl.hp.com
Subject: [chuck: a few fundamental questions about RF signals]
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, chuck@eng.umd.edu (Chuck Harris - WA3UQV) writes:

...
>In coax cable, at the frequencies that hams use (>100KHz or so) the signal
>is not being conducted by the shield or the center conductor. It is traveling
>thru the center conductor's dielectric as an E-M wave. This E-M wave is being
>guided by the center conductor and the shield. But this is another story.
...

But there certainly ARE currents flowing on the inner and outer conductors. There are also fields that exist in the dielectric between the inner and outer conductors. The fields cannot exist without the currents and vice versa. Whether the "signal" is being carried by the fields or the currents is a matter of opinion -- an opinion held with almost religious fervor in many cases!

AL N1AL

Date: 3 Apr 91 18:33:56 GMT
From: news-mail-gateway@ucsd.edu
Subject: AOR 2002 scanner
To: info-hams@ucsd.edu

From: Colin Schmutter <shmc0874@BCIT.BITNET>

I am using an AOR 2002 scanner to receive polar orbiting fax signals.

While reception is satisfactory, the IF bandwidth appears to be too wide in wide FM mode. Strong local signals are breaking through into the IF strip causing interference and distortion.

The IF bandwidth is rated at +/- 50 Khz.

I think that by narrowing the IF bandwidth in WFM mode the problem may be reduced.

Does anyone know of modifications to do this and of other mods to improve polar fax reception?

COLIN SCHMUTTER
NETWORK TECHNICIAN, COMPUTER RESOURCES : (604) 432-8858

Date: 3 Apr 91 22:26:46 GMT
From: sdd.hp.com!wuarchive!uwm.edu!ux1.cso.uiuc.edu!phil@ucsd.edu
Subject: ATV: AM or FM
To: info-hams@ucsd.edu

smith@sndpit.enet.dec.com (Willie Smith) writes:

>In article <22762@unix.SRI.COM>, larsen@snmp.sri.com (Alan Larson) writes...
>>In article <1018@sousa.enet.dec.com> smith@sndpit.enet.dec.com (Willie Smith) writes:
>>Some of the specific advantages
>>of FM include:
>>
>> + Better linearity and greater average transmitted power.
>> Truly linear amplifiers are rare in the amateur community
>> in the VHF and UHF frequency range. The effective power
>> of AM TV is 1/8 the carrier power.

>OK, so even at small deviations (and 6 MHz bandwidths), doesn't FM win over
>AM just for greater average power?

Not necessarily. Given that the lower frequency portions of the video
get more benefit from a constant deviation, being as the modulation index
is much higher, I'd expect that the high average power level is effectively
being dedicated unevenly, favoring the lower frequencies.

It happens to be that FM uses an ANGULAR form of modulation and the noise
being introduced is RECTILINEAR. When plotting the modulation on a vector
graph, the FM forms a circle rotating around the center zero. For high
frequencies it does not get to rotate very far (low modulation index) but
for lower frequencies it gets to rotate a lot more, perhaps making many
complete circles around during the rise time of a low frequency. Noise
comes in only as a new vector, jumping around randomly, and is merely
ADDED to the signal vector. Against a high modulation index it has no
hope of making much effect, as long as the demodulator is looking at just
the angle of modulation (it can have major effect to the envelope).
But against a low modulation index, the noise can actually appear to be
much greater than the modulation, when the carrier strength (length of
the vector) is comparably low.

With a given drop in signal strength, AM S/N drops linearly whereas FM
drops very non-linearly, the curve of which depends on the parameters.
When you have a very weak signal, FM can actually give you MORE noise
than AM. Applying such techniques as averaging a sequence of frames
together to improve the signal won't work under FM except in a very
narrow range between where FM loses the signal altogether and has such
a signal signal you don't need to improve it.

>Well, in some cases, the vendor is also the manufacturer (can you say
>Garage Shop?) and he may well have pulled the designs from ham publications
>, so maybe no-one really does know (except the denizens of this group, of
>course, who are educating me daily!). Thanks for the input! Sounds like I
>ought to get AM and FM TV rigs and compare them, eh? Anyone got a spare
>credit card I can use? :+}

I use my spare credit cards (the ones with expire dates in 1990 and earlier)
as insulation tabs for my HT batteries. Just cut them to size and don't use
the part where the number is.

--
/*****\

/ Phil Howard -- KA9WGN -- phil@ux1.cso.uiuc.edu	\
\ Lietuva laisva -- Brivu Latviju -- Eesti vabaks	/
/*****	/

Date: 3 Apr 91 13:12:17 GMT
From: pa.dec.com!rust.zso.dec.com!shlump.nac.dec.com!ryn.mro4.dec.com!
ultnix.enet.dec.com!taber@decwrl.dec.com
Subject: Can you really learn code from tapes?
To: info-hams@ucsd.edu

In article <8346@crash.cts.com>, wlup69@pro-harvest.cts.com (Rob Heins) writes:

|>
|>Seriously though, with the new Technician Class, why waste time using code
|>you're never going to use. At least, I know I won't...If I ever decide to
|>get a Ham license, (or a ham for dinner) I'm not gonna spend a lot of time
|>to learn something I'll never use.
|>

I'd be careful about making life-long decisions with no experience.
Let's say you decide to skip the ham dinner and get a license. Probably
it's a good bet that you'd get a Technocode. Fine. But from there on,
you'll be exposed to the ham experience and there's no telling if you'll
decide to use CW or not. The Tech bands aren't all FM chatter, you know
-- there are plenty of uses for code in V/UHF work and you might
accidentally get sucked into one of them. From there it's a short step
to deciding you'd like to try HF, and then the code people have got
you....

--

>>>==>PStJTT
Patrick St. Joseph Teahan Taber, KC1TD

If I was authorized to speak for my employer, I'd be too important to
waste my time on this crap....

Date: 3 Apr 91 23:52:01 GMT
From: news-mail-gateway@ucsd.edu
Subject: DSP for Kenwoods
To: info-hams@ucsd.edu

Now that everyone's favorite Amateur radio company (KENWOOD) has created
an add-on Digital Signal Processor for the NEW TS-850 my question is
will the new add-on box work with older rigs?

Date: 3 Apr 91 14:17:30 GMT
From: swrinde!zaphod.mps.ohio-state.edu!think.com!snorkelwacker.mit.edu!bloom-
beacon!eru!hagbard!sunic!mcsun!ukc!icdoc!syma!sylvank@ucsd.edu

Subject: DX Contest TX/RX needed
To: info-hams@ucsd.edu

I am looking for a used, light weight, HF transciever with built-in antenna tuner and keyer for use in DX contests from Europe, Africa and Asia. Perhaps one of the Icom series would be suitable. If you have any suggestions, comments or leads I would appreciate hearing from you.

TNX
Syl (G0/VE5ZX)
sylvank@syma.sussex.ac.uk

Date: 2 Apr 91 19:47:13 GMT
From: hpl-opus!hpnmdla!alanb@hplabs.hpl.hp.com
Subject: First No-code Tech?
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, johns@hpwade.hp.com (John Silva) writes:

>... Back then (circa 1978), my only way to get into the 'Ham-club'
>was to get my Novice license (which I somehow managed to do with the
>help of a local HP Ham). I never kept up with my code, so I just let
>my license expire (KA1BUG, if anyone has that now ???). If this no-code
>Tech license had existed, I'm sure I might have 'stayed around'.

Wait a sec... The only difference in the "no-code" Tech license is
the 5 wpm, which you had to pass anyway to get the novice.

AL N1AL

Date: 3 Apr 91 20:19:09 GMT
From: usc!sdd.hp.com!elroy.jpl.nasa.gov!grian!morris@ucsd.edu
Subject: frequency standards
To: info-hams@ucsd.edu

gary@ke4zv.UUCP (Gary Coffman) writes: [edited...]

>In article <1991Mar30.174528.3952@ee.eng.ohio-state.edu> rlong@ee.eng.ohio-
state.edu (Prof. Ronald Long) writes:
>>I recall reading once that the tv networks use rubidium clocks to
>>set the color burst frequency and that you could pick off a signal
>>from your home tv which would essentially give you access to a
>>frequency standard of laboratory accuracy. There was a caveat that

>>you had to be careful to get a live broadcast.

>I commented on this in another post. The use of frame synchronizers at
>TV stations and the use of live satellite broadcasts by the networks
>have made this technique obsolete. The signal you receive from your
>local station, even during a network program, has passed through one
>or more frame synchronizers before being aired. This changes whatever
>accuracy the original signal may have had to the accuracy of the local
>station's sync generator. Usually these are simple crystal controlled
>generators with no more accuracy than your home counter.

I checked on this with a local ham who works for a network TV station.
He says it is true, but there is still a cheap standard available: the
transmitter carrier. Apparently KCBS-TV (channel 2) here in Los Angeles uses
a rubidium standard for it's transmitter frequency control. A few weeks
later I was over at another friends 2-way shop and remarked on that and
the chief tech showed me that his Cushman service monitor was currently
set to the video carrier frequency - he uses the TV station to verify
the synthesizer in the Cushman before he sets a customer radio to
frequency.

I do not know how many stations use a rubidium standard as a transmitter
frequency control, but it may be worth checking.
I probably don't need to say this, but use the video carrier - it's AM.
The sound carrier is FM and would not be "on frequency" except in a
dead-silence period, and even then, the stereo subcarrier could/would be on
and not give you a clean carrier.

I have added a project to my queue: a series resonant filter feeding a
preamp feeding another filter feeding my counter so I can set my counter
to frequency and verify it. Point a 6m beam at the TV transmitter and I
should be able to get a clean count. This goes after the project to
replace my counters cheap 10mhz reference crystal to a Motorola .0001
"channel element".

Date: 3 Apr 91 22:14:45 GMT
From: epic!karn@bellcore.bellcore.com
Subject: frequency standards
To: info-hams@ucsd.edu

In article <2659@ke4zv.UUCP>, gary@ke4zv.UUCP (Gary Coffman) writes:
|> Please be aware however, as the author
|> of that article was not, that this technique is now worthless due
|> to changes in the operating procedures and equipment of the networks
|> and the local stations.

Actually, it depends on your local TV station. Some do have good frequency standards. WMPB-TV, the PBS station near Baltimore MD, does have (or at least had) a cesium beam reference running their sync generator when I worked there. This station feeds a half dozen other transmitters around the state in real time (including the 5MW EIRP WAPB channel 22 transmitter in Annapolis) so if you happen to live in the MD/DC/NVA area you can get a very accurate frequency reference.

But Gary is right about most of the other stations - when I got bored I would often dial up the other Baltimore TV stations on the vectorscope and note how far off they were relative to a "real" standard. Some (I won't say who) may even have been outside the legal limits.

Your best bet is to call around to your local TV stations. Ask their engineers what kind of frequency reference they use for their house sync generator.

Note: even if a station's video sync signals are derived from an atomic (rubidium or cesium) reference, its transmitter RF carriers are invariably generated by ordinary crystals (albeit in ovens), so don't use them as precise frequency references. The tolerance on UHF TV transmitters is (or was) +/-1 KHz for the video carrier and +/-1 KHz for the nominal 4.5 MHz video/audio carrier separation, and as I recall we often used much of that...

Phil

Date: 2 Apr 91 20:07:59 GMT
From: hpl-opus!hpnmdla!alanb@hplabs.hpl.hp.com
Subject: HR2600 mod wanted (extend receive)
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, elmquist@nachos.SSESCO.com (Chris Elmquist) writes:

>In article <40080@netnews.upenn.edu> traw@grad1.cis.upenn.edu writes:
>>

>> I am looking for the modification to the President HR2600 to
>>extend the receive range to cover the 11 meter band. I know this
 ^^^^^^

>>can be done with the 2510, but is there a similar mod
>>for the 2600?

>Oh-Oh! Here we go again...

Sounds reasonable to me. (He only wants to receive.)

There's an outfit that sells a replacement CPU (you have to unsolder the old one) that will do this. ChipSwitch, 4773 Sonoma Hwy. Suite 132, Santa Rosa, CA 95409-4269.

AL N1AL
(No affiliation with company)

Date: 4 Apr 91 02:44:56 GMT
From: news-mail-gateway@ucsd.edu
Subject: Info-Hams Digest V91 #263
To: info-hams@ucsd.edu

Anyone had experience with the Alinco DJ560T, dual-band portable?
I understand some of their earlier products were real dogs. Rumor (only) is that this one might be a winner--especially at \$400 or so.

Rick Patterson
BITNET: rpatters@kentvm
MCI: 6503372908

Date: 4 Apr 91 01:29:50 GMT
From: sdd.hp.com!elroy.jpl.nasa.gov!ncar!news.miami.edu!mthvax!wb8foz@ucsd.edu
Subject: large 110->220 transformers
To: info-hams@ucsd.edu

I found the catalog from my favorite surplus house. Here's what they list in big xfmr's:

1) a four winding beast: each winding 104/110/120 v. @ 14 amps.
So you can step up, down or sideways ;-}
75 #'s light \$149.00

2) 240/480 in, 90 v out. 1500w. Ignore the secondary, use it
240-->120 autoxfmr. 52#, \$99.00

3) 220/480 in, 13v@60a, 56@10, 115@10 out. as in 2),
88#, \$99.00

These are at R&D Electronics, 800-642-1123, real technocrats @
216 621-1052.

My only connection with them is I've left lots of my money
there over the last 20 years...

Keep the problems Phil mentioned in mind before you buy a big
xfmr.

--

A host is a host from coast to coast.....wb8foz@mthvax.cs.miami.edu
& no one will talk to a host that's close.....(305) 255-RTFM
Unless the host (that isn't close).....pob 570-335
is busy, hung or dead.....33257-0335

Date: 3 Apr 91 22:36:11 GMT
From: sdd.hp.com!spool.mu.edu!news.cs.indiana.edu!ux1.cso.uiuc.edu!phil@ucsd.edu
Subject: Licensing Philosophy?
To: info-hams@ucsd.edu

MOSIER%UNCG.BITNET@ncsuvn.ncsu.EDU (Steve Mosier) writes:

>Bill asks:

>> That is, the government doesn't believe you need to know how carburetors,
>> exhausts, fuel injection, air conditioning, etc., work to be a responsible
>> vehicle operator without interfering with others on the roadways. Why then
>> must a radio operator know about the internals of his gear to obtain access
>> to the airwaves?

Also, knowing certain things, like the fact that modulation generates
sidebands, that finals can oscillate, etc., make you a better ham because
you are prepared to deal with these things. For instance you know not
to operate right at 21.450 MHz unless you happen to be using a clean LSB.

However it is common knowledge, we hope, that if you drive right on the
center line, that part of the car is actually in the opposing lane.

>Ham Radio would then become a *COMMUNICATIONS UTILITY* hobby rather than an
>*EXPERIMENTAL* hobby, and some of the basic reasons for maintaining it would
>vanish. It might then be easier to also discount the public service and
>goodwill aspects of the fundamental principals, and BINGO!: Ham Radio can
>finally give up its spectrum to "more important" services.

Of course they didn't ask those questions for a CB license, and you don't
even need that anymore.

>You are, in effect, asking why Amateur Radio cannot simply be a communications
>utility, with professional services available to fix it when it breaks down.
>The answer is that there are already plenty of communications utilities (yes,
>even in dire emergencies: chances are great that a cellular phone will pass
>by an accident long before a 2m mobile with autopatch access), and Amateur

>Radio would never be able, and should not try, to compete with them. And
>that's why, in general, when I need to reach out and touch someone, I pick
>up the phone, not the mike.

It's a good thing you don't have to learn about microwave circuit design
to be allowed to use a cellphone (or is it?).

--

```
/*****\
/ Phil Howard -- KA9WGN -- phil@ux1.cso.uiuc.edu      \
\ Lietuva laisva -- Brivu Latviju -- Eesti vabaks      /
\*****/
```

Date: 2 Apr 91 13:56:10 GMT
From: pa.dec.com!rust.zso.dec.com!shlump.nac.dec.com!ryn.mro4.dec.com!
ultnix.enet.dec.com!taber@decwrl.dec.com
Subject: Licensing Philosophy?
To: info-hams@ucsd.edu

In article <12562@pt.cs.cmu.edu>, chiles@chiles.slisp.cs.cmu.edu (Bill
Chiles) writes:

```
|>
|>A friend was asking me the other day why one must learn some basic
|>electronics to obtain a amateur radio license. I immediately thought
|>about
|>a body of skilled operators and technicians to push the state of the
|>art
|>and help out in communication emergencies, yada yada yada, and I
|>thought
|>about inducing self-respect and arrogance to support professional
|>behavior
|>on the air.
|>
|>Then he made two more points: with the state of modern gear, one or
|>two can
|>fix their own rigs without a factory, and the rigs do everything.
|>The
|>other point was that the government doesn't restrict the public's
|>access to
|>operating motor vehicles to those who demonstrate basic mechanic's
|>skills.
```

[...] <much more deleted.>

As some will point out with varying degrees of politeness, there is
already a set of frequencies set aside for people whose sole interest is

talking -- those are the CB allocations. You might argue that CB is not a nice place to be, but that's an enforcement issue -- work it through the FCC and your congressfolks

In the case of the ham bands, you're tested on theory because the license conveys the right to make, modify and experiment with transmitters. It doesn't matter if you choose not to, you have the right to do it. So the licensing process must examine you, however minimally.

Should there be a new license class for non-technical hams (if that's not self-contradicting?) Well, certainly the people who have the allocations right now will say no. If you think there's a benefit to making it otherwise, you're free to pursue it -- that's what democracy is all about. Certainly there are already a large number of "talk-only" hams. But I don't think you'd get a wide acceptance of no-tech licensing even from them.

--

>>>==>PStJTT

Patrick St. Joseph Teahan Taber, KC1TD

If I was authorized to speak for my employer, I'd be too important to waste my time on this crap....

Date: 3 Apr 91 21:58:48 GMT
From: epic!karn@bellcore.bellcore.com
Subject: RG8U
To: info-hams@ucsd.edu

In article <3742@jethro.Corp.Sun.COM> tjonz@Corp.Sun.COM writes:
>Did anyone manage to work Belden, RG8U, during his DXpedition to the Coaxial
>Islands on April 1?
>
>
>Todd, KB6JXT

Hmm, I thought RG8U was in the Belden Congo. Has the ITU reassigned the prefix?

Phil

Date: 3 Apr 91 21:58:10 GMT
From: soleil!mlb.semi.harris.com!trantor.harris-atd.com!su19f.ess.harris.com!

jhobson@RUTGERS.EDU
Subject: RG8U
To: info-hams@ucsd.edu

>
>Did anyone manage to work Belden, RG8U, during his DXpedition to the Coaxial
>Islands on April 1?

>
Hey!!!!!! Nobody told me about this!!! Have I been INSULATED from
the news about this? I'd like to personally upBRAID the organizer
who excluded me during TRANSMISSION by leaving me out of the "to:"
LINE. I'm so upset about this that I may go UNBALANCED.

--

Harv Hobson
WB4NPL
jhobson@su19f.ess.harris.com
407-727-6642

Harris GASD
P.O. Box 94000, M/S 101/4827
Melbourne FL 32902
USA

Date: 3 Apr 91 14:00:04 GMT
From: amdcad!dgcad!dg-rtp!aquila!harrism@sun.com
Subject: RG8U
To: info-hams@ucsd.edu

In article <3742@jethro.Corp.Sun.COM>, tjonz@caliban.Sun.COM (Todd Jonz, KB6JXT)
writes:

|> Did anyone manage to work Belden, RG8U, during his DXpedition to the Coaxial
|> Islands on April 1?

Yes, we had a wavelength of a QSO. His QSL manager is RG8X. Be sure and send
a few db if you want to QSL direct (Otherwise the ARRL burro is acceptable).

Date: 3 Apr 91 18:19:27 GMT
From: sdd.hp.com!hp-pcd!hplsla!charlier@ucsd.edu
Subject: RG8U
To: info-hams@ucsd.edu

>in rec.radio.amateur.misc / tjonz@caliban.Sun.COM (Todd Jonz, KB6JXT) sez:
>Did anyone manage to work Belden, RG8U, during his DXpedition to the Coaxial
>Islands on April 1?

>
Yeah, I worked him in the Poisson d'Avril contest.... Didn't you?

Anyone got a QSL route?

Charlie Panek (UUCP: hplabs!hp-pcd!hplsla!charlier)
KX7L (SMTP: charlier@lsid.hp.com)

Date: 3 Apr 91 23:13:35 GMT
From: news-mail-gateway@ucsd.edu
Subject: sattelite tracking
To: info-hams@ucsd.edu

Netlanders,

Does anyone have/make a satellite tracking program for the Mac SE or Mac II?
Inquiring minds want to know....

thanks and 73s.....

trop (Troy)

Troy T. Pummill, N6XMV	trop@hls.com
Sr. Technical Instructor	...uunet!lanslide.hls.com!trop
Hughes LAN Systems	
(415) 966-7915	1225 Charleston Rd., Silicon Gulch
Mountain View, CA 94043	The preceding drive1 is entirely my own!

Invisible airwaves crackle with life, bright antenna bristles with the energy
Emotional feedback on timeless wavelength, bearing a gift beyond price....
Almost free. "Spirit of Radio" - Rush

End of Info-Hams Digest
